

The Role of Technological Innovation in Community Development (a case study on Implementation of Application SIDEKEM on Pemalang District)

Yuliana Kristanto¹, Amni Zarkasyi Rahman²

¹ Diponegoro University, yulianakristanto@gmail.com

² Diponegoro University, amni.zr@gmail.com

Abstract

Government Regulation No. 72 in 2005 about Government Villages implied that the role of national development within the village currently has a vital role. One of the essential elements required of the village is the village information system. One example that has been put into practice is Pemalang District successfully developed application systems information village (SID) that is named SIDEKEM. This innovation was even recognized by the international arena with the award he received Champion Award from the ITU (Information Technology Union) saplings organization UNESCO-UN/PBB) by Regent of Pemalang. SIDEKEM that was originally aimed at facilitating administrative services at the village community, it also managed to move the village economy and changing social paradigm that had long existed. In this example of cases studies of implementation of SIDEKEM in one of the model village is at Penggarit Village. This village is via SIDEKEM successfully introduced the yield potential of growing and creating new jobs opportunity. It is aligned with the theory of community development, a process which is a community effort own are integrated with government authorities to improve the socio-economic conditions and cultural community, integrate the community into the national life and encourage the contribution of the community to a more optimal for national progress (Hayden 1979:175). Surely in practice always find some barriers. But SIDEKEM in all of its limitations has managed to push changes in the community at Penggarit Village.

Keywords: Village Community; System Information Village; SIDEKEM; Pemalang District; Community Development

1. INTRODUCTION

The village government is a government structure in charge of administering the territory of village level. This institution is regulated through Government Regulation No. 72 in 2005 about village Government, and the village information system is an indispensable part in the implementation of the Law – laws of the village. Village ACT Article 86 about information system construction of village and rural area Development clearly mentioned that the village is entitled to access information through the information system developed by the local Government of its County or City.

As it known that in law the position of the village, the village is very strategic. At the weigh presented: the village had the right origin and traditional rights to organize and take care of the interests of the local community and the role embodies the ideals of independence based on the Indonesia Republic Constitution in 1945; and that in the course of the Indonesia Republic's attempt, the village has developed in various forms so that needs to be protected and empowered to become powerful, advanced, independent, and democratic so as to create a strong foundation in the implementing the

governance and development towards a society that is equitable, prosperous and peace, thus the village now has a position and a very big responsibility. Since then, the village has a wider chance spaces, including the right to obtain development information.

Accordance to the ease of accessing information development expected the construction of the village not only stop at the point of serving community needs its village but also manage the potential of its village to the village economic sustainability. With an advanced economy then village youth don't necessarily have to wander into town to look for a livelihood. Thus, culture as well as local wisdom can keep awake. Information system development of the village and these areas thus could not be seen as technical and administrative steps. Access to information should be put in a broader framework: a door that opens up many possibilities for the village to take part in the care of its household affairs, and at the same time be a step in the village became contributions part of the settlement of the nation problems. Therefore, the conception of the village information system, it is important to be seen not only in the frame from the top down, but also from the bottom up and the dynamics of the relationship.

Pemalang City is being one such example of the Implementation of Information System Applications and Village of Pemalang District that is known as (SIDEKEM). It is an application basically on desktop that is developed using the Python programming language. This application is the flagship application of the village used to support a wide range of necessities, ranging from a profile of the village, Population Data, Statistical Data, Administrative Correspondence to financial Data, and also the Village map and still more variety of information needs data that has been integrated the Implementation of Information System Applications and Village of Pemalang District known as (SIDEKEM). SIDEKEM application is an application that is only used in special areas of

Pemalang District, has been applied in 211 villages in Pemalang District.

SIDEKEM program won an award for innovation by the originator of a fairly simple programming language but have a significant effect. Pemalang's Regent from March 18 until March 21, 2018 undergone work visits to Geneva in order to be awarded the *Champion Award* from the IT (*Information Technology Union*) saplings organization UNESCO-UN/PBB) due to the accomplishments of the District Government of Pemalang District together volunteer *Puspindes* (Informatics and Rural Empowerment Center) in implementing information systems and communication technology area- in Pemalang District. This achievement is the only county of 35 districts/cities in Central Java.

This application is not only giving information on population in the village but also as a means for communities who have been migrated to other areas more easily take care of the documents at the village level. For example, the extension of DRIVING LICENCE, etc. SIDEKEM itself does not stand alone but is also supported by the updated village website. This application is expected to not only can help to provide a good public service and quality, but also boost the economy and the development of the village. When the construction of the village succeeded in creating new jobs – field then expected population of productive age is no longer a need to wander to other areas. This is when it is associated with the concept of sustainable development is an effort to improve the well-being of the community, to fulfill the necessities and aspirations of human beings. Sustainable development in the truly meaning is intended to seek equitable development between generations on the present or future (Emil Salim, 1990 in Askar Jaya (2004).

The research of SIDEKEM has been implemented by Maharani et, al (2017), then her research focused on SIDEKEM as a part of public service innovation. While this research is emphasizing on its role on the village development continuity.

Based on the background and the identification of the problems above can be formulated that these research problems are:

1. How does program SIDEKEM is applied? Together with its factor is such as the driving factor and its obstacle?
2. How does the role of SIDEKEM in the application dependencies with the construction of village community?

2. RESEARCH METHOD

The research method used is descriptive qualitative method. A descriptive qualitative study sought to describe a social symptom. In other words, this research aims to describe the properties of something that was underway at the time of the study. A descriptive investigation method fixed on solving the problem that exists in modern times. This method tells, analyzes, and classifying. In this study, researchers try to explain whether this SIDEKEM application is running is effective in giving the value of the benefits and sustainability for the community or the public accompanied through data obtained by researchers as well as those obtained from a variety of sources.

3. RESULT AND DISCUSSION

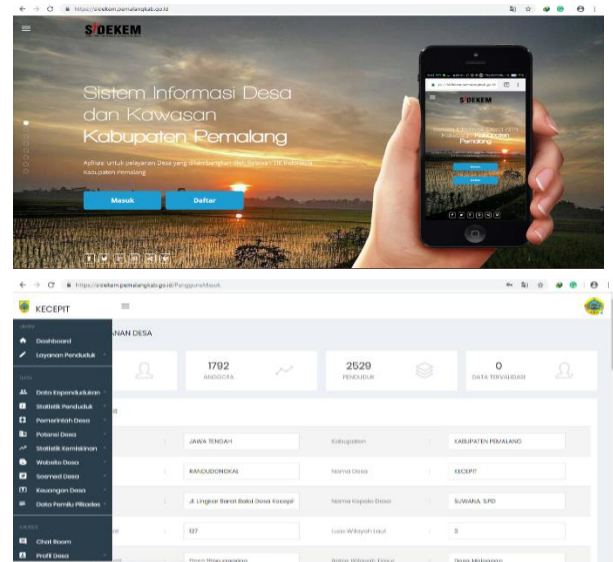
3.1. General Illustration of SIDEKEM

SIDEKEM (Information System of the Village and the Area of Pemalang) is an application of village information system (SID) developed by Volunteer of TIK Pemalang used by villages in Pemalang District to assist the Government in managing village data thoroughly. At the first time SIDEKEM was conceived by a group of young people who were utilizing facilities free WIFI in Telkom area, because look at the large number of enthusiastic young people who often use such facilities, then the Office of Empowerment The communities broke out ideas to engage young people who use the facility to incorporated in a program data management of community scattered in Pemalang District.

At the beginning of development process, this SIDEKEM application was an application used

offline, in which this application must be installed in advance to a PC when it will be used. However, along with the development of technologies that support the use of this application is experiencing developments that can be used online, i.e. simply log onto the website and enter the email address name along with the key that has been given to every admin of the village and it has been connected with the internet. SIDEKEM application began to spread in 172 villages in Pemalang District including 41 villages became the pilot project in the execution of this application. The implementation of SIDEKEM around the communities of Pemalang District is not an easy thing, considering the terrain that must be accomplished by volunteers in doing the introduction of SIDEKEM requires patience and high spirits, as each village has a different condition geographically. As for the duties of ICT Volunteers who joined in the implementation of Technology Information SIDEKEM such as introduction SIDEKEM, training and dissemination of the use of SIDEKEM, so that the communities' necessity can be fulfill easily, quickly and inexpensively. ICT Volunteers who joined in the execution of this Technology Information group, then given places or coordination by the County Government of Pemalang District named PUSPINDES (Rural Information Empowerment Center).

Figure 1
Front View of SIDEKEM



3.2. The Implementation of SIDEKEM

SIDEKEM initially is the application that will be implemented in the entire village in Pemalang District, a number of villages from the rest of the village expected 41 172 villages could become a pilot project. But in reality, not all villages pilot project was successfully put into practice. In this study, the researchers took the example of the implementation of the most successful SIDEKEM in Penggarit Village, Taman District. The village Penggarit is a village in Taman District, Pemalang Central Java, Indonesia which was formed after 1730. Formerly, Penggarit Village is the region consist of 2 areas namely the eastern region called Siber and western area called Sirandu.

The jobs classification that are owned by the residents of this village as follows:

- a. Farmers as many as 342 people
- b. Merchants as many as 230 people
- c. Civil Servant as many as 56 people
- d. Craftsman as many as 46 people
- e. Teachers as many as 43 people
- f. Midwife/Nurse as many as 6 people
- g. Army/Police as many as 14 people
- h. Retiring as many as 36 people
- i. Drivers as many as 14 people
- j. Labor as many as 260 people
- k. Rent Service as many as 4 people
- l. Private Sectors as many as 784 people

From the data above, it can be seen that the highest livelihood in this village is the work of the private sector. At the beginning, the youth in Penggarit Village after graduating from SENIORS HIGH SCHOOL most will wander looking for work to other areas such as Jakarta or other large cities. So it was left in Penggarit Village were mostly community who have entered the age of unproductive and most chose the same occupation of the livelihood is farming. Then what happens is the growth of the village became stagnant.

After the introductions of SIDEKEM by local Government of Pemalang District joining to PUSPINDES, Penggarit Village be used as one example of the village pilot project. The village

chief of Penggarit Village who had a vision and mission "the realization of a prosperous in Penggarit Village, innovative and technology-based information" welcomed with open arms. The implementation of SIDEKEM conducted in Penggarit Village is managed by an admin who is appointed by the chief of the village in order to operate the application. There are several ancillary devices such as the tower of the village, 1 PC in the form of computers, CPUS, servers, printers and other ancillary devices.

The implementation of information systems that do include the management of the documents and the provision of information through the online potential of the village through the village website is always updated. Penggarit Village has a fairly large natural potential, one of which was the result of mango cultivation. This village is the largest producer of mango avocado in Pemalang District. According to the village website with updated information about the potential of this nature spread easily through cyberspace.

Figure 2.

Front View of Penggarit Village Website



The benefits are felt by the village because SIDEKEM does not need a long time, with professional management of the village chief, the village attracted many tourists from outside the region to come to the village and buy their mangoes potential have. Penggarit Village held a natural pick for the tourists, and managing sales professionals with a mango avocado to the outside area with the online system. Promotions conducted any vigorous through the village's participation in the festival of the fruit done by Pemalang Government regularly

held annually. Along the economic growth condition of Penggarit Village appears much ground work for several young men in this village. Some of the natural attractions are opened and serve the sale to outside provinces.

With the model of leadership that always appreciates innovation, village Chief of Penggarit Village was elected for the second time without a rival any means. This shows that the people have felt the changes toward better for the village development.

Implementation of the information system in Penggarit Village is inseparable from the existence of barriers or factors that support it. Factors that support the existence of this village information system implementation i.e. existence of harmony between the vision and the Mission of the village Chief of Penggarit Village with a system that is being developed by Pernalang District, these communities are very enthusiastic about the existence of a system that makes it easy to matters relating to the administration of the settlement, there was support from the BPD (Village Representative Agency) that does not dispute the existence of implementation of SIDEKEM, and the community participation is very high in support of the attainment of the village technological literacy. In addition to supporting factors, there are also barriers in the implementation of the information system of this village.

As for the barriers experienced by some communities who have smartphone or mobile phone hasn't entirely can be connected to the internet, so that the services that are already socialized can be accessed online have not been carried out with the maximum given the circumstances of a society that is largely not yet literate technologies.

3.3. SIDEKEM Linkages in Village Community Development

Community development is a complex and interdisciplinary field of study – one that is boundary spanning in its scope and

multidimensional in its applications. Why is this? It's because community development not only concerns the physical realm of community, but also the social, cultural, economic, political and environmental aspects as well. Evolving from an original needs-based emphasis to one that is more inclusive and asset-based, community development is a now a distinct and recognized field of study. Today, scholars and practitioners of community are development.

The theory is the ultimate guide to understanding the complexity of public life and social as well as economic change (Collins 1998; Ritzer 1996).

The point was originally offered a definition of community development that is both typical and universal and can be applied to all types of postindustrial society from pre-industrial to industrial. Bhattacharyya (2004) agreed this requirement when he defined community development as a process of creating or enhancing the solidarity and the Agency. He confirmed that solidarity is about building a sense of sharing the profound identity and code of ethics for the developer community. The developers need solidarity as they sort through the conflicting vision and definition of problems among the population of ethnic and ideological compound. This may have occurred in the context of "community places" such as the environment, city, or village.

Following the definition of the community development, there are seven major problems involving solidarity and development agents namely: (1) relationships, (2) structure, (3) power (4), sharing of meaning (5) communication for change, (6) motivation for decision making, and (7) integration (Journal Community Development Edited by Rhonda Phillips and Robert h. Pittman, 2009).

According to Hayden (1979:175) Community Development is a process which is the business community's own integrated with government authorities to improve the socio-economic conditions and cultural community, integrate the

community into the national life and encouraging the contribution of the community to a more optimal for national progressing.

According to the theories above, it can be drawn the conclusion that community development is a process that involves not only the local community but also integrated with government authorities in the framework of development able to cope problems occurred in the local community and encourage it to a better State.

In this case, SIDEKEM is the flagship application of the village used to support a wide range of necessities, ranging from a profile of the village, Population Data, Statistical Data, Administrative Correspondence to financial Data, the Village also includes a map of the village and many more various information needs data that has been integrated in the application of information systems and the Village of Pematang (SIDEKEM). The application is expected to not only can help to provide a good public service and quality, but also boost the economy and the development of the village. When the construction of the village succeeded in creating new jobs – field then expected population of productive age is no longer a need to wander to other areas.

As has been described previously, community development involving seven problems that must be addressed:

1. Relationships, related to solidarity. How the level of trust and reciprocity are in the process of social development. In Penggarit village, as the pilot implementation of SIDEKEM relationship between bureaucrats with good interwoven as well as society. Elements of a bureaucrat here is the Chief of Penggarit Village. The community felt the village leadership in moving the economy make Penggarit Village will be advanced, so that there is reciprocity happens. The chief of village gain the trust of the citizens, vice versa the citizens feel a positive economic impact.

2. Structure, the structure here refers to the social practices, organization, or group that plays a role in solidarity and capacity development. In the implementation of SIDEKEM, PUSPINDES created as a container by Government of Pematang District continued to intervene in order to make the role can be felt by the village communities. PUSPINDES routine doing training or *maintenance* against the implementation of the SIDEKEM in this village.
3. Power, refers to the relationship with those who control the resources, such as land, labor, capital, and knowledge, or those who have greater access. In the implementation of village community development through SIDEKEM, the supreme power as initial Manager surely is the Government. The level of Government concern Pematang District against implementation of SIDEKEM can be seen from the acquisition of technological innovation award in Geneva.
4. Sharing of meaning, it relates to meaning, referring to a particular symbol, a given person to a place, physical objects, behavior, events, or actions. Like for example in one community development industry is believed to be able to develop the economy of the region and society development. However, this belief may be different in other areas considered friendly to the environment economy seen being better. In essence, there must be harmony prior opinion in the community, what is considered good to be able to advance the community. In Penggarit Village, the community realizes that the potential of plantations owned by the village had value economically as well as can be a village identity.
5. Communication for change, communication for change associated with the concept of full participation, consistent value in the community development literature. In the

framework are often dominated by technicians, companies, sectors or national political constraints, practitioners ask questions about how the voice of the citizens of bias. Communication which used conventional channels is still with, e.g. face to face, letter – correspondence. Now with online communications, information about developments in the outside world can be easily accessed.

6. The motivation for decision making, motivation can affect many aspects of community development. This helps us to understand whether people will or will not get involved in community initiatives. It also affects the Community making difficult vote, a process that usually involves thinking through all the policies to decide which one will maximize the individual necessity of the collective. Surely this problem also occurred in Penggarit Village. The incidence of SIDEKEM as a new communication channels between citizens who are still there in the village as well as the communities who have been wandering in its implementation is still experiencing a variety of obstacles, one of which was the technology literacy awareness has not been evenly distributed. However, these problems are covered by a high motivation to develop the level of livelihood of the citizens. This is related to the element that is integration.
7. Integration, issues and doubts when first launched information systems surely appear in the community. Who will operationalize? Whose will be held liable if there are damages? Whether this troublesome systems will enhance the village as a community that is not strong with the community of the city. This is where the role of a leader is perceived. The village Chief was able to embrace the whole of the elements in the communities to work implementing information system of the village. This process does not run short

because according to the interviews that we did, the village chief was able to change the *mindset* of the citizens at the time of the first period of his rule is almost over or around 4 years.

4. CONCLUSION

SIDEKEM is a form of public service innovation developed by the Government of e Pemalang District in technology-based information that provides convenience to the community in order to fulfill the necessities related to the administration of the settlement. This application is managed by an admin who every day is in the neighborhood or village hall whose are ready to serve the public good through offline or online. In addition, these applications are also managed by the Organization, which are Government of Pemalang District called with Rural Information Empowerment Center (PUSPINDES) that acts as a database or server of all the applications listed at SIDEKEM of Pemalang District.

The impact is obtained by the presence of this SIDEKEM application i.e. the community become more easy and efficient in fullfil its necessities in terms of administrative villages as well as the potential of an area that is always updated in the website of the village contributes to economic quite significant for the people of the village. In this study of case adaptation is an example implementation of the SIDEKEM in Penggarit Village that was once the youth in productive age prefer to leave the village and migrated to other areas to look for a job, now reduced in number and chose to work in the sectors of agro tourism. Penggarit Village has a bountiful fruit orchards potential without having to know the seasons. One example of its potential was the mango avocado. The implementation of any technology implemented slowly but surely by the community of Penggarit Village not only in the economic sector but also the public service sector. So, people who have been wandering in the Affairs of the document did not experience barriers. Access to information is from the outside world.

On each execution of innovation models are usually encountered barriers in their implementation. On the implementation of the SIDEKEM, the obstacles that are encountered public awareness of the importance of technology not all evenly. Especially at the period age that was not productive of consciousness to use this application yet. The issue is compliance with the seven elements of *community development* issues compiled by Rhonda Phillips in the journal *An Introduction of Community Development*, 2009. There are seven elements of problems that often occur in the implementation of a community development in a community. That is, (1) relationships, (2) structure, (3) power, (4) sharing of meaning, (5) communication for change, (6) motivation for decision making, and (7) integration.

Generally, *Community Development* is a process which is the business community's own integrated with government authorities to improve the socio-economic conditions and cultural community, integrate the community into the national life and encouraging more Community contribution optimally for national progress. Those seven problems that typically occur in the implementation of Community Development conducted a continuous change in Penggarit Village in the framework of the implementation of SIDEKEM. Penggarit Village community cooperated in the implementation of the construction in its village because it felt there were a *benefit* and a good reciprocal relation between the Government of Pematang District with residents of the village.

5. RECOMMENDATION

Based on research conducted found obstacles in the implementation of systems information village-based on information technology against its role in the improvement of the construction of the village, researchers recommend the following:

1. Implementing the overall dissemination to the community in each village about SIDEKEM application. So the benefit against the development of the economy of the

village is not just limited to the Penggarit Village or villages that have been designated as a model village.

2. Empowering to the youth who are empty for the information to be given training in the use of better technology. To overcome the obstacles in the form of the community who are reluctant to learn the technology, then the proper solution is to do the maximum empowerment against youth –mentoring in order to place on the community that is still not literate technology.
3. *Community development* is an attempt to do continuous because it involves a State of the community. So, the advice of researchers is innovation being done should not be stopped until the execution of SIDEKEM application but also may be done through the establishment of social character development of entrepreneurship among the youth. So, in the future if the commodity nature of experiencing market malaise, economic growth will not be stopped because it immediately sought an alternative market to the other.

6. REFERENCES

- Phillips, Rhonda, H., Pittman, Robert. (2009). *An Introduction to Community Development. British Library Cataloguing in Publication Data*, 307.1'4—dc22 200802513
- Antonio, H. d Rancang Bangun Sistem Informasi Administrasi Informatika (SI-ADIF) (2012). ELKHA
- Eddi Ridwan (edited), (2017). *Peran dan Manfaat Sistem Informasi Desa*
- Yogi Ramadhani, M. Syaiful Alim, Eko M.A., Ari Fadli dan Retno Supriyanti, *Pengembangan Sistem Informasi Desa Terpadu Berbasis Web Aplikasi Pada Desa Sidakangen, Kab. Purbalingg, Jurnal Telematika Vol 8 No. 1 Februari 2015, ISSN : 1979 – 925X e-ISSN : 2442 – 4528*

<http://firmansyahsikumbang.blogspot.com/2012/01/pengembangan-komunitas-community.html>